

City of Chicago Emerging Contaminant Study

Analysis of Endocrine Disrupting Chemicals, Pharmaceuticals, and Personal Care Products

Table A: Lake Michigan and Drinking Water Results

Sample Locations: Water samples were collected from the shore intakes, offshore crib intakes, and finished water outlets at the Jardine and South Water Purification Plants.

Sample Dates: 2009: May 19, September 15, and December 16 2010: April 13, August 10 2011: January 19

Analyte Name (Common Name)	Common Use	Regulatory Limit (ng/L) ¹	Number of Samples Tested ²	Lowest Level that Can Be Detected (ng/L) ³	Water Samples With Detections ⁴					
					Lake Michigan			Drinking Water		
					#	Min (ng/L)	Max (ng/L)	#	Min (ng/L)	Max (ng/L)
1,7-Dimethylxanthine	Caffeine metabolite	NR	69	5						
17alpha-Estradiol	Steroid hormone	NR (CCL3)	70	0.5						
17beta-Estradiol	Steroid hormone	NR (CCL3)	46	0.3						
2,4,6-Trichlorophenol (TCP)	Biocide, preservative	NR	35	100						
2,4-Dichlorophenoxyacetic acid (2,4-D)	Herbicide	70,000	35	5	1	20	20	1	21	21
2,6-Di-tert-butylphenol	Industrial chemical	NR	29	25						
2-Phenylphenol	Agricultural fungicide	NR	35	100						
4-Methylphenol	Disinfectant	NR	29	25						
4-n-Octylphenol	Surfactant, detergent metabolite	NR	35	500						
4-Nonyl Phenol	Surfactant metabolite	NR	52	25						
4-tert-Octylphenol	Surfactant, detergent metabolite	NR	58	10						
Acesulfame-K (Ace K)	Artificial sweetener	NR	5	20				1	22	22
Acetaminophen (Tylenol)	Analgesic, anti-inflammatory	NR	135	1	1	2.8	2.8			
Albuterol	Antiasthmatic	NR	35	5						
Alpha Chlordane	Pesticide	2,000	29	25						
Amoxicillin	Antibiotic	NR	29	20						
Androstenedione	Steroid hormone precursor	NR	81	0.3						
Antipyrine or Phenazone	Analgesic	NR	40	1						
Atenolol	Beta-blocker	NR	81	1	7	1	4	4	3	4
Atrazine	Herbicide	3,000	64	0.95	37	14	47	20	9.7	48
Atrazine-desethyl (DEA)	Herbicide degradate	NR	35	5	18	7.8	67	10	7.7	57
Atrazine-desethyl-desisopropyl (DACT)	Herbicide degradate	NR	35	5	19	6.3	70	10	46	100
Atrazine-desisopropyl (DIA)	Herbicide degradate	NR	35	5	18	5.8	24	10	5.5	18
Azithromycin	Antibiotic	NR	35	1						
Bacitracin	Antibiotic	NR	35	500						
Bendroflumethiazide	Diuretic	NR	35	5						
Benzylpenicillin	Antibiotic	NR	35	2						
Bezafibrate	Lipid regulator	NR	70	0.5						
Bisphenol A (BPA)	Plasticizer	NR	146	10	7	10	54	4	14	51
Bromacil	Herbicide	NR	35	5						
Butalbital	Barbituate	NR	70	5						
Butylparaben	Fungicide	NR	35	5						
Caffeine	Stimulant	NR	169	3	34	3.1	13	11	3.5	13
Carbadox	Antibiotic	NR	70	5						
Carbamazepine	Anticonvulsant, antimanic agent	NR	140	0.95						
Carbaryl	Insecticide	NR	29	50						
Carisoprodol	Muscle Relaxer	NR	35	5						
Chloramphenicol	Antibiotic	NR	70	5						
Chloridazon	Herbicide	NR	35	5						
Chlorpyrifos	Insecticide	NR	29	25						
Chlortetracycline	Antibiotic	NR	35	50						
Chlortoluron	Herbicide	NR	35	5						
Cimetidine (Tagamet)	Antacid, antihistamine	NR	35	5						
Ciprofloxacin	Antibiotic	NR	35	50						
cis-Testosterone (Epi-testosterone)	Steroid hormone	NR	35	0.1				4	0.2	0.2
Clofibric acid	Herbicide	NR	40	0.5						
Cotinine	Nicotine metabolite	NR	105	1	45	1.5	3	23	1	3
Cyanazine (Bladex)	Herbicide	NR	35	5	4	29	30	2	23	23
Dehydronifedipine	Cardiovascular drug metabolite	NR	35	5	1	7.7	7.7	1	70	70
Dexamethasone	Glucocorticoid-steroids	NR	23	5						
Diazepam (Valium)	Antianxiety	NR	128	0.95						
Diazinon	Insecticide	NR	29	25						
Diclofenac	NSAID	NR	105	0.5						
Dieldrin	Insecticide	NR	29	25						
Diethylstilbestrol (DES)	Synthetic estrogen	NR	70	0.5						
Diltiazem	Vasodilator	NR	35	0.1	2	0.1	0.1			
Diuron	Herbicide	NR (CCL3)	35	5						

Analyte Name (Common Name)	Common Use	Regulatory Limit (ng/L) ¹	Number of Samples Tested ²	Lowest Level that Can Be Detected (ng/L) ³	Water Samples With Detections ⁴					
					Lake Michigan			Drinking Water		
					#	Min (ng/L)	Max (ng/L)	#	Min (ng/L)	Max (ng/L)
Doxycycline	Antibiotic	NR	35	50						
Enrofloxacin	Antibiotic	NR	35	50						
Equilin	Horse estrogen	NR (CCL3)	11	0.3						
Erythromycin	Antibiotic	NR (CCL3)	57	1						
Estradiol	Steroid hormone	NR	93	1						
Estriol	Steroid hormone	NR (CCL3)	81	0.3						
Estrone	Steroid hormone	NR (CCL3)	139	0.3						
Ethinyl Estradiol	Synthetic steroid hormone	NR (CCL3)	139	0.3						
Ethylparaben	Preservative	NR	35	20						
Flumequine	Antibiotic	NR	35	5						
Fluoxetine (Prozac)	Antidepressant	NR	108	1						
Furosemide (Lasix)	Diuretic	NR	30	10	4	49	100	2	45	53
Gemfibrozil (Lopid)	Lipid regulator	NR	140	0.5	20	0.8	3.2	7	0.6	1.7
Hydrocodone (Vicodin)	Opiate	NR	34	1						
Ibuprofen (Advil)	NSAID	NR	121	1	8	2.1	3	2	2.9	4.6
Iohexol	Contrast Agent	NR	35	10						
Iopromide	Contrast Agent	NR	128	5	1	11	11	1	11	11
Isobutylparaben	Preservative	NR	35	5						
Isoproturon	Herbicide	NR	29	20						
Ketoprofen	NSAID	NR	35	5				1	26	26
Ketorolac	NSAID	NR	35	5						
Lasalocid	Antibacterial	NR	35	1						
Levothyroxine	Thyroid hormone	NR	47	2						
Lidocaine	Anesthetic	NR	29	5						
Lincomycin	Antibiotic	NR	70	0.1						
Linuron	Herbicide	NR	41	5						
Meclofenamic Acid	Anti inflammatory	NR	35	5						
Meprobamate	Antianxiety	NR	93	1	6	1	1	1	1	1
Metazachlor	Herbicide	NR	35	5						
Methadone	Opiate	NR	27	4.8				1	16	16
Methyl parathion	Insecticide	NR	29	25						
Methylparaben	Preservative	NR	35	20						
Metoprolol (Lopresor)	Beta-blocker	NR	35	5						
Monensin	Antibiotic	NR	35	1						
N,N-diethyl-m-toluamide (DEET)	Insect repellent	NR	134	2	28	2.1	9	18	2.2	11
Naproxen (Aleve)	NSAID	NR	104	0.95						
Narasin	Antibacterial and antiprotozoal	NR	35	0.1						
Nicotine	Stimulant	NR	35	5	12	6	10	2	5	5
Nifedipine	Calcium blocker	NR	35	5						
Nonylphenol, isomer mix	Surfactant by-product	NR	35	500						
Norethisterone	Synthetic steroid hormone	NR (CCL3)	35	5						
Norfloxacin	Antibiotic	NR	35	50						
Oleandomycin	Antibiotic	NR	35	1						
Oxolinic acid	Antibiotic	NR	35	5						
Oxybenzone	Sun Screen	NR	34	1.9						
Oxytetracycline	Antibiotic	NR	35	500						
Pentachlorophenol	Pesticide	1,000	35	100						
Pentoxifylline	Blood thinner	NR	70	0.95						
Perfluorooctane sulfonate (PFOS)	Fluorosurfactant	NR (CCL3)	35	0.2	23	0.55	2.8	12	0.52	2.8
Phenol	Disinfectant; industrial chemical	NR	29	50						
Phenoxymethylpenicillin	Antibiotic	NR	35	2						
Phenytoin (Dilantin)	Antiepileptic	NR	123	2	2	3	5	1	2	2
Prednisone	Glucocorticoid- steroids	NR	47	2						
Primidone	Anticonvulsant	NR	58	5						
Progesterone	Steroid hormone	NR	140	0.1	3	0.1	0.1	4	0.4	0.6
Propazine	Herbicide	NR	35	5						
Propylparaben	Preservative	NR	35	5						
Quinoline	Precursor chemical	NR (CCL3)	5	5						
Roxithromycin	Antibiotic	NR	35	1						
Salicylic acid	Anti-acne	NR	55	10						
Salinomycin	Antibacterial and antiprotozoal	NR	47	0.1						
Simazine	Herbicide	4,000	35	5	14	6.8	15	8	6.4	14
Simvastatin	Lipid regulator	NR	35	1						
Sucralose (Splenda)	Artificial sweetener	NR	35	1						
Sulfachloropyridazine	Antibiotic	NR	82	5						
Sulfadiazine	Antibiotic	NR	82	1	1	6.4	6.4			
Sulfadimethoxine	Antibiotic	NR	82	0.1						
Sulfamerazine	Antibiotic	NR	82	1						
Sulfamethazine	Antibiotic	NR	82	1						
Sulfamethizole	Antibiotic	NR	82	1						

Analyte Name (Common Name)	Common Use	Regulatory Limit (ng/L) ¹	Number of Samples Tested ²	Lowest Level that Can Be Detected (ng/L) ³	Water Samples With Detections ⁴					
					Lake Michigan			Drinking Water		
					#	Min (ng/L)	Max (ng/L)	#	Min (ng/L)	Max (ng/L)
Sulfamethoxazole	Antibiotic	NR	152	0.95	48	1	7.6			
Sulfasalazine	Anti inflammatory	NR	23	5						
Sulfathiazole	Antimicrobial	NR	82	1						
Testosterone	Steroid hormone	NR	98	0.3						
Tetrabromobisphenol A (TBBPA)	Flame retardant	NR	35	100						
Tetracycline	Anitbiotic	NR	23	500						
Theobromine	Caffeine metabolite	NR	66	5	3	7.3	89	1	13	13
Theophylline	Respiratory drug	NR	69	5						
trans-Testosterone	Steroid hormone	NR	35	0.1	3	0.1	0.4			
Triclocarban	Antibacterial	NR	23	5						
Triclosan	Antibacterial	NR	169	5						
Trimethoprim	Antibiotic	NR	139	1						
Triphenyl phosphate	Plasticizer and fire retardant	NR	35	25						
Tris (2-butoxyethyl) phosphate (TBEP)	Flame retardant	NR	35	200	2	220	280	2	280	320
Tris(2,3-dichloropropyl) phosphate (TDCPP)	Flame retardant	NR	40	5						
Tris(2-chloroethyl) phosphate (TCEP)	Flame retardant	NR	65	5	1	11	11			
TCPP	Flame retardant	NR	5	5						
Tylosin	Antibiotic	NR	47	1						
Virginiamycin	Antibiotic	NR	47	0.5						
Warfarin	Anticoagulant	NR	35	5						

The analytical results and the batch quality control data received from the three independent laboratories were reviewed for quality prior to compiling this table. Suspicious data were flagged as "Questionable." Data with internal laboratory quality control issues and data with strong conflicts between laboratories were flagged as "Not Trusted." "Questionable" data are included in this summary table, but "Not Trusted" data were removed. Refer to Table B for a full listing of the flagged data.

- Regulatory Limits are based upon the Maximum Contaminant Levels listed in the United States Environmental Protection Agency's (USEPA's) National Primary Drinking Water Regulations. The current list of regulated drinking water contaminants is available on the USEPA's website (<http://www.epa.gov/safewater/contaminants/>).
NR = Not Regulated (ng/L) = nanograms per liter (CCL3) = Unregulated analytes listed in the "Drinking Water Contaminant Candidate List 3" published by the USEPA in September, 2009.
- This refers to the total number of Lake Michigan and drinking water samples tested. Water samples were sent to three independent laboratories. The laboratories analyzed the water samples for different lists of analytes, with some overlap. For example, caffeine was analyzed by each of the three laboratories, including one laboratory that analyzed caffeine by three different methods. Currently, there is no standardization of analytes or reporting limits for analyses of these emerging contaminants. As noted above, data flagged as "Not Trusted" are not included in this table.
- The "Lowest Level that Can Be Detected" refers to the lowest minimum reporting limit (MRL) for each analyte (MRLs for an analyte may vary by laboratory, method, and batch).
- A "detection" is an analytical result at or above the MRL for that analyte (MRLs for an analyte may vary by laboratory, method, and batch). "Lake Michigan" refers to untreated source water sampled from the shore or crib intakes. "Drinking Water" refers to finished water sampled from the purification plant outlets. A blank indicates that there were no detections above the MRLs for the corresponding analyte. There were four "Lake Michigan" samples for every two "Drinking Water" samples.
= Number of Samples with Detections Min = Lowest Level Detected (ng/L) Max = Highest Level Detected (ng/L)

Modern analytical laboratories can detect some chemical compounds at concentrations in the range of nanograms per liter (ng/L). One nanogram of a substance in a liter of water is often referred to as "parts per trillion" or "ppt." Since it is difficult to conceptualize a trillion of anything, the following example from The MegaPenny Project website (<http://www.kokogiak.com/megapenny/>) may help the reader visualize the concentrations reported in this table. The Willis Tower (formerly known as the Sears Tower) has a volume of approximately 2.6 trillion pennies (2,623,684,608,000). Therefore, to visualize 5 ng/L, think of 13 pennies within a solid Willis Tower made entirely of pennies.

City of Chicago Emerging Contaminant Study

Analysis of Endocrine Disrupting Chemicals, Pharmaceuticals, and Personal Care Products

Table B: Flagged Data

Sample Locations: Water samples were collected from the shore intakes, crib intakes, and finished water outlets at the Jardine and South Water Purification Plants
 Sample Dates: 2009: May 19, September 15, and December 16 2010: April 13, August 10 2011: January 19

Sample Date	QA/QC Flag ¹	Analyte Name (Common Name)	Sample Source ²	Result (ng/L) ³	Lowest Level that Can Be Detected (ng/L) ⁴	QA/QC Comment ⁵
5/19/2009	Not Trusted	Atrazine	Lake Michigan	= 31	1	E1
5/19/2009	Not Trusted	Atrazine	Lake Michigan	= 30	1	E1
5/19/2009	Not Trusted	Atrazine	Lake Michigan	= 29	1	E1
5/19/2009	Not Trusted	Atrazine	Lake Michigan	= 26	1	E1
5/19/2009	Not Trusted	Atrazine	Drinking	= 8.6	1	E1
5/19/2009	Not Trusted	Atrazine	Drinking	= 7.1	1	E1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Drinking	= 2.9	1	A1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Lake Michigan	= 2.6	1	A1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Lake Michigan	= 2.2	1	A1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Lake Michigan	ND	1	A1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Lake Michigan	ND	1	A1
5/19/2009	Not Trusted	Ibuprofen (Advil)	Drinking	ND	1	A1
5/19/2009	Not Trusted	Theobromine	Lake Michigan	= 25	5	B1
5/19/2009	Not Trusted	Theobromine	Drinking	= 24	5	B1
5/19/2009	Not Trusted	Theobromine	Drinking	= 15	5	B1
5/19/2009	Not Trusted	Theobromine	Lake Michigan	= 6.1	5	B1
5/19/2009	Not Trusted	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	= 40	10	C1
5/19/2009	Not Trusted	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	= 31	10	C1
5/19/2009	Not Trusted	Tris(2-chloroethyl) phosphate (TCEP)	Drinking	= 17	10	C1
5/19/2009	Not Trusted	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	= 16	10	C1
5/19/2009	Not Trusted	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	= 13	10	C1
5/19/2009	Questionable	17alpha-Estradiol	Drinking	ND	1	G1
5/19/2009	Questionable	17alpha-Estradiol	Drinking	ND	1	G1
5/19/2009	Questionable	2,4,6-Trichlorophenol (TCP)	Drinking	ND	100	H1
5/19/2009	Questionable	2-Phenylphenol	Drinking	ND	100	H1
5/19/2009	Questionable	4-n-Octylphenol	Drinking	ND	500	H1
5/19/2009	Questionable	4-tert-Octylphenol	Drinking	ND	500	H1
5/19/2009	Questionable	Acetaminophen (Tylenol)	Drinking	ND	1	G1
5/19/2009	Questionable	Acetaminophen (Tylenol)	Drinking	ND	1	G1
5/19/2009	Questionable	Androstenedione	Drinking	ND	10	G1
5/19/2009	Questionable	Androstenedione	Drinking	ND	10	G1
5/19/2009	Questionable	Bisphenol A (BPA)	Drinking	ND	100	H1
5/19/2009	Questionable	Bisphenol A (BPA)	Drinking	ND	10	G1
5/19/2009	Questionable	Bisphenol A (BPA)	Drinking	ND	10	G1
5/19/2009	Questionable	Caffeine	Drinking	ND	5	G1
5/19/2009	Questionable	Caffeine	Drinking	ND	5	G1
5/19/2009	Questionable	Carbamazepine	Drinking	ND	1	G1
5/19/2009	Questionable	Carbamazepine	Drinking	ND	1	G1
5/19/2009	Questionable	Cotinine	Lake Michigan	= 2	1	F1
5/19/2009	Questionable	Cotinine	Lake Michigan	= 2	1	F1
5/19/2009	Questionable	Diazepam (Valium)	Drinking	ND	1	G1
5/19/2009	Questionable	Diazepam (Valium)	Drinking	ND	1	G1
5/19/2009	Questionable	Diclofenac	Drinking	ND	2	G1
5/19/2009	Questionable	Diclofenac	Drinking	ND	2	G1
5/19/2009	Questionable	Diethylstilbestrol (DES)	Drinking	ND	2	G1
5/19/2009	Questionable	Diethylstilbestrol (DES)	Drinking	ND	2	G1
5/19/2009	Questionable	Estradiol	Drinking	ND	2	G1
5/19/2009	Questionable	Estradiol	Drinking	ND	2	G1
5/19/2009	Questionable	Estriol	Drinking	ND	1	G1
5/19/2009	Questionable	Estriol	Drinking	ND	1	G1
5/19/2009	Questionable	Estrone	Drinking	ND	1	G1
5/19/2009	Questionable	Estrone	Drinking	ND	1	G1
5/19/2009	Questionable	Ethinyl Estradiol	Drinking	ND	2	G1
5/19/2009	Questionable	Ethinyl Estradiol	Drinking	ND	2	G1
5/19/2009	Questionable	Fluoxetine (Prozac)	Drinking	ND	1	G1
5/19/2009	Questionable	Fluoxetine (Prozac)	Drinking	ND	1	G1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Drinking	ND	1	D1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Lake Michigan	ND	1	D1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Lake Michigan	ND	1	D1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Lake Michigan	ND	1	D1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Lake Michigan	ND	1	D1
5/19/2009	Questionable	Gemfibrozil (Lopid)	Drinking	ND	1	D1
5/19/2009	Questionable	Hydrocodone (Vicodin)	Drinking	ND	1	G1
5/19/2009	Questionable	Hydrocodone (Vicodin)	Drinking	ND	1	G1
5/19/2009	Questionable	Ibuprofen (Advil)	Drinking	ND	10	G1
5/19/2009	Questionable	Ibuprofen (Advil)	Drinking	ND	10	G1
5/19/2009	Questionable	Iopromide	Drinking	ND	10	G1
5/19/2009	Questionable	Iopromide	Drinking	ND	10	G1
5/19/2009	Questionable	Meprobamate	Drinking	ND	5	G1
5/19/2009	Questionable	Meprobamate	Drinking	ND	5	G1
5/19/2009	Questionable	Methadone	Drinking	ND	5	G1
5/19/2009	Questionable	Methadone	Drinking	ND	5	G1
5/19/2009	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	= 7.9	5	G1
5/19/2009	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	= 5	5	G1
5/19/2009	Questionable	Naproxen (Aleve)	Drinking	ND	1	G1

Sample Date	QA/QC Flag ¹	Analyte Name (Common Name)	Sample Source ²	Result (ng/L) ³	Lowest Level that Can Be Detected (ng/L) ⁴	QA/QC Comment ⁵
5/19/2009	Questionable	Naproxen (Aleve)	Drinking	ND	1	G1
5/19/2009	Questionable	Nicotine	Lake Michigan	= 8	5	F1
5/19/2009	Questionable	Nicotine	Lake Michigan	= 8	5	F1
5/19/2009	Questionable	Nonylphenol, isomer mix	Drinking	ND	500	H1
5/19/2009	Questionable	Oxybenzone	Drinking	ND	2	G1
5/19/2009	Questionable	Oxybenzone	Drinking	ND	2	G1
5/19/2009	Questionable	Pentachlorophenol	Drinking	ND	100	H1
5/19/2009	Questionable	Pentoxifylline	Drinking	ND	1	G1
5/19/2009	Questionable	Pentoxifylline	Drinking	ND	1	G1
5/19/2009	Questionable	Phenytoin (Dilantin)	Drinking	ND	5	G1
5/19/2009	Questionable	Phenytoin (Dilantin)	Drinking	ND	5	G1
5/19/2009	Questionable	Progesterone	Drinking	ND	10	G1
5/19/2009	Questionable	Progesterone	Drinking	ND	10	G1
5/19/2009	Questionable	Salicylic acid	Drinking	ND	10	G1
5/19/2009	Questionable	Salicylic acid	Drinking	ND	10	G1
5/19/2009	Questionable	Sulfamethoxazole	Drinking	ND	1	G1
5/19/2009	Questionable	Sulfamethoxazole	Drinking	ND	1	G1
5/19/2009	Questionable	Testosterone	Drinking	ND	10	G1
5/19/2009	Questionable	Testosterone	Drinking	ND	10	G1
5/19/2009	Questionable	Tetrabromobisphenol A (TBBPA)	Drinking	ND	100	H1
5/19/2009	Questionable	Theobromine	Lake Michigan	= 89	5	B2
5/19/2009	Questionable	Theobromine	Lake Michigan	= 54	5	B2
5/19/2009	Questionable	Triclosan	Drinking	ND	10	G1
5/19/2009	Questionable	Triclosan	Drinking	ND	10	G1
5/19/2009	Questionable	Trimethoprim	Drinking	ND	5	G1
5/19/2009	Questionable	Trimethoprim	Drinking	ND	5	G1
5/19/2009	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Drinking	ND	10	C2
9/15/2009	Not Trusted	Fluoxetine (Prozac)	Drinking	= 15	1	K3
9/15/2009	Not Trusted	Hydrocodone (Vicodin)	Drinking	= 61	1	K2
9/15/2009	Not Trusted	Ibuprofen (Advil)	Lake Michigan	= 1.4	1	K1
9/15/2009	Not Trusted	Methadone	Drinking	= 6.2	5	K2
9/15/2009	Not Trusted	Trimethoprim	Drinking	= 12	5	K3
9/15/2009	Questionable	Atrazine	Lake Michigan	= 47	5	I1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 41	5	I1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 41	5	I1
9/15/2009	Questionable	Atrazine	Drinking	= 41	5	I1
9/15/2009	Questionable	Atrazine	Drinking	= 40	5	I1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 39	5	I1
9/15/2009	Questionable	Atrazine	Drinking	= 22	1	L1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 21	1	L1
9/15/2009	Questionable	Atrazine	Drinking	= 21	1	L1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 20	1	L1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 20	1	L1
9/15/2009	Questionable	Atrazine	Lake Michigan	= 20	1	L1
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 54	10	J1
9/15/2009	Questionable	Bisphenol A (BPA)	Drinking	= 51	10	J1
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 44	10	J1
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 22	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Drinking	= 17	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 16	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Drinking	= 15	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 15	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Drinking	= 14	10	J1
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 13	10	K4
9/15/2009	Questionable	Bisphenol A (BPA)	Lake Michigan	= 10	10	J1
9/15/2009	Questionable	Chloramphenicol	Drinking	ND	5	M1
9/15/2009	Questionable	Chlortetracycline	Drinking	ND	50	M1
9/15/2009	Questionable	Ciprofloxacin	Drinking	ND	50	M1
9/15/2009	Questionable	Doxycycline	Drinking	ND	50	M1
9/15/2009	Questionable	Enrofloxacin	Drinking	ND	500	M1
9/15/2009	Questionable	Fluoxetine (Prozac)	Drinking	ND	1	M1
9/15/2009	Questionable	Levothyroxine	Drinking	ND	2	M1
9/15/2009	Questionable	Naproxen (Aleve)	Drinking	ND	2	M1
9/15/2009	Questionable	Norfloxacin	Drinking	ND	500	M1
9/15/2009	Questionable	Phenytoin (Dilantin)	Drinking	ND	2	M1
9/15/2009	Questionable	Prednisone	Drinking	ND	2	M1
9/15/2009	Questionable	Sulfachloropyridazine	Drinking	ND	50	M1
9/15/2009	Questionable	Sulfadimethoxine	Drinking	ND	5	M1
9/15/2009	Questionable	Sulfamerazine	Drinking	ND	500	M1
9/15/2009	Questionable	Sulfamethazine	Drinking	ND	500	M1
9/15/2009	Questionable	Sulfamethizole	Drinking	ND	5	M1
9/15/2009	Questionable	Sulfamethoxazole	Drinking	ND	2	M1
9/15/2009	Questionable	Sulfathiazole	Drinking	ND	50	M1
9/15/2009	Questionable	Theophylline	Drinking	ND	5	M1
9/15/2009	Questionable	Tylosin	Drinking	ND	50	M1
12/16/2009	Not Trusted	Acetaminophen (Tylenol)	Drinking	= 13	5	E2
12/16/2009	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 59	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 43	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Drinking	= 41	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 40	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 38	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 36	10	K5
12/16/2009	Not Trusted	Bisphenol A (BPA)	Drinking	= 30	10	K5
12/16/2009	Not Trusted	Erythromycin	Drinking	= 26	10	E2
12/16/2009	Not Trusted	Fluoxetine (Prozac)	Lake Michigan	= 15	1	E3
12/16/2009	Not Trusted	Methadone	Lake Michigan	= 11	5	K1
12/16/2009	Not Trusted	Naproxen (Aleve)	Drinking	= 14	10	E2
12/16/2009	Not Trusted	Salicylic acid	Lake Michigan	= 70	50	E2

Sample Date	QA/QC Flag ¹	Analyte Name (Common Name)	Sample Source ²	Result (ng/L) ³	Lowest Level that Can Be Detected (ng/L) ⁴	QA/QC Comment ⁵
12/16/2009	Not Trusted	Salicylic acid	Lake Michigan	= 70	50	E2
12/16/2009	Not Trusted	Salicylic acid	Lake Michigan	= 50	50	E2
12/16/2009	Questionable	Atrazine	Drinking	= 24	1	L2
12/16/2009	Questionable	Atrazine	Lake Michigan	= 24	1	L2
12/16/2009	Questionable	Atrazine	Lake Michigan	= 23	1	L2
12/16/2009	Questionable	Atrazine	Lake Michigan	= 23	1	L2
12/16/2009	Questionable	Atrazine	Lake Michigan	= 22	1	L2
12/16/2009	Questionable	Atrazine	Drinking	= 22	1	L2
12/16/2009	Questionable	Caffeine	Lake Michigan	= 12	10	O2
12/16/2009	Questionable	Caffeine	Drinking	= 12	10	O1
12/16/2009	Questionable	Caffeine	Lake Michigan	= 11	10	O1
12/16/2009	Questionable	Caffeine	Lake Michigan	= 10	10	O1
12/16/2009	Questionable	Caffeine	Lake Michigan	= 5.3	5	O2
12/16/2009	Questionable	Caffeine	Lake Michigan	= 5.1	5	O2
12/16/2009	Questionable	Caffeine	Lake Michigan	= 3.4	3	O1
12/16/2009	Questionable	Dehydronifedipine	Drinking	= 70	5	N1
12/16/2009	Questionable	Ketoprofen	Drinking	= 26	5	N1
12/16/2009	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Drinking	= 320	200	N1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	2,6-Di-tert-butylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Methylphenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Nonyl Phenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Nonyl Phenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	4-Nonyl Phenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Nonyl Phenol	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	4-Nonyl Phenol	Drinking	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Drinking	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Drinking	ND	25	P1
4/13/2010	Not Trusted	Alpha Chlordane	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Drinking	= 42	10	K5
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 40	10	K5
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 38	10	K5
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 37	10	K5
4/13/2010	Not Trusted	Bisphenol A (BPA)	Drinking	= 33	10	K5
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Drinking	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Drinking	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Drinking	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Caffeine	Drinking	ND	25	P1
4/13/2010	Not Trusted	Carbaryl	Drinking	ND	50	P1
4/13/2010	Not Trusted	Carbaryl	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Carbaryl	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Carbaryl	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Carbaryl	Drinking	ND	50	P1
4/13/2010	Not Trusted	Carbaryl	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Chlorpyrifos	Drinking	ND	25	P1
4/13/2010	Not Trusted	Chlorpyrifos	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Chlorpyrifos	Drinking	ND	25	P1
4/13/2010	Not Trusted	Chlorpyrifos	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Chlorpyrifos	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Chlorpyrifos	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Drinking	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Drinking	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Diazinon	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Drinking	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Drinking	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Dieldrin	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Drinking	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Drinking	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	Methyl parathion	Lake Michigan	ND	25	P1

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4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Drinking	ND	25	P1
4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	ND	25	P1
4/13/2010	Not Trusted	N,N-diethyl-m-toluamide (DEET)	Drinking	ND	25	P1
4/13/2010	Not Trusted	Phenol	Drinking	ND	50	P1
4/13/2010	Not Trusted	Phenol	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Phenol	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Phenol	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Phenol	Drinking	ND	50	P1
4/13/2010	Not Trusted	Phenol	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Lake Michigan	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Drinking	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Drinking	ND	50	P1
4/13/2010	Not Trusted	Triclosan	Lake Michigan	ND	50	P1
4/13/2010	Questionable	Caffeine	Lake Michigan	= 13	3	Y3
4/13/2010	Questionable	Caffeine	Lake Michigan	= 9.6	3	Y3
4/13/2010	Questionable	Caffeine	Drinking	= 8.6	3	Y3
4/13/2010	Questionable	Caffeine	Drinking	= 7.1	3	Y3
4/13/2010	Questionable	Caffeine	Lake Michigan	= 6.2	3	Y3
4/13/2010	Questionable	Caffeine	Lake Michigan	= 4	3	Y3
4/13/2010	Questionable	Fluoxetine (Prozac)	Lake Michigan	ND	1	L3
4/13/2010	Questionable	Fluoxetine (Prozac)	Drinking	ND	1	L3
4/13/2010	Questionable	Fluoxetine (Prozac)	Drinking	ND	1	L3
4/13/2010	Questionable	Fluoxetine (Prozac)	Lake Michigan	ND	1	L3
4/13/2010	Questionable	Fluoxetine (Prozac)	Lake Michigan	ND	1	L3
4/13/2010	Questionable	Gemfibrozil (Lopid)	Drinking	ND	1	D1
4/13/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
4/13/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
4/13/2010	Questionable	Hydrocodone (Vicodin)	Drinking	ND	20	L3
4/13/2010	Questionable	Hydrocodone (Vicodin)	Drinking	ND	20	L3
4/13/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
4/13/2010	Questionable	Iopromide	Drinking	= 11	10	A3
4/13/2010	Questionable	Iopromide	Lake Michigan	= 11	10	A3
4/13/2010	Questionable	Levothyroxine	Drinking	ND	2	M3
4/13/2010	Questionable	Levothyroxine	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Levothyroxine	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Levothyroxine	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Levothyroxine	Drinking	ND	2	M3
4/13/2010	Questionable	Levothyroxine	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Methadone	Lake Michigan	ND	5	L3
4/13/2010	Questionable	Methadone	Lake Michigan	ND	5	L3
4/13/2010	Questionable	Methadone	Drinking	ND	5	L3
4/13/2010	Questionable	Methadone	Lake Michigan	ND	5	L3
4/13/2010	Questionable	Methadone	Drinking	ND	5	L3
4/13/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	= 7.1	2	Z3
4/13/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	= 5.2	2	Z3
4/13/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	= 4.9	2	Z3
4/13/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	= 4	2	Z3
4/13/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	ND	2	D1
4/13/2010	Questionable	Prednisone	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Prednisone	Drinking	ND	2	M3
4/13/2010	Questionable	Prednisone	Drinking	ND	2	M3
4/13/2010	Questionable	Prednisone	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Prednisone	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Prednisone	Lake Michigan	ND	2	M3
4/13/2010	Questionable	Sulfadiazine	Lake Michigan	= 6.4	5	E2
4/13/2010	Questionable	Triclosan	Lake Michigan	ND	25	L3
4/13/2010	Questionable	Trimethoprim	Lake Michigan	ND	5	L3
4/13/2010	Questionable	Trimethoprim	Drinking	ND	5	L3
4/13/2010	Questionable	Triphenyl phosphate	Lake Michigan	ND	25	P2
4/13/2010	Questionable	Triphenyl phosphate	Drinking	ND	25	P2
4/13/2010	Questionable	Triphenyl phosphate	Lake Michigan	ND	25	P2
4/13/2010	Questionable	Triphenyl phosphate	Lake Michigan	ND	25	P2
4/13/2010	Questionable	Triphenyl phosphate	Drinking	ND	25	P2
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Drinking	= 280	200	P3
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Lake Michigan	= 280	200	P3
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Drinking	ND	200	P2
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Lake Michigan	ND	200	P2
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Lake Michigan	ND	200	P2
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Lake Michigan	ND	200	P2
4/13/2010	Questionable	Tris (2-butoxyethyl) phosphate (TBEP)	Lake Michigan	ND	200	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Drinking	ND	50	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Drinking	ND	50	P2
4/13/2010	Questionable	Tris(2,3-dichloropropyl) phosphate (TDCPP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Drinking	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Drinking	ND	50	P2
4/13/2010	Questionable	Tris(2-chloroethyl) phosphate (TCEP)	Lake Michigan	ND	50	P2
8/10/2010	Not Trusted	Acetaminophen (Tylenol)	Lake Michigan	= 9.1	5	E2
8/10/2010	Not Trusted	Acetaminophen (Tylenol)	Drinking	= 6.7	5	E2

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8/10/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 57	10	K1
8/10/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 56	10	K1
8/10/2010	Not Trusted	Bisphenol A (BPA)	Drinking	= 54	10	K1
8/10/2010	Not Trusted	Bisphenol A (BPA)	Drinking	= 48	10	K1
8/10/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 47	10	K1
8/10/2010	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 46	10	K1
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Drinking	ND	1	K6
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Lake Michigan	ND	1	K6
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Lake Michigan	ND	1	K6
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Drinking	ND	1	K6
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Lake Michigan	ND	1	K6
8/10/2010	Not Trusted	Fluoxetine (Prozac)	Lake Michigan	ND	1	K6
8/10/2010	Not Trusted	Methadone	Drinking	= 5.3	5	K5
8/10/2010	Not Trusted	Methadone	Lake Michigan	ND	5	K6
8/10/2010	Not Trusted	Methadone	Lake Michigan	ND	5	K6
8/10/2010	Not Trusted	Methadone	Lake Michigan	ND	5	K6
8/10/2010	Not Trusted	Methadone	Drinking	ND	5	K6
8/10/2010	Not Trusted	Methadone	Lake Michigan	ND	5	K6
8/10/2010	Questionable	Acetaminophen (Tylenol)	Lake Michigan	= 2.8	1	Q1
8/10/2010	Questionable	Atrazine	Drinking	= 33	1	I1
8/10/2010	Questionable	Atrazine	Drinking	= 9.7	5	I1
8/10/2010	Questionable	Atrazine	Lake Michigan	ND	5	D1
8/10/2010	Questionable	Atrazine-desethyl (DEA)	Lake Michigan	ND	5	D2
8/10/2010	Questionable	Atrazine-desethyl-desisopropyl (DACT)	Lake Michigan	= 6.3	5	J2
8/10/2010	Questionable	Atrazine-desisopropyl (DIA)	Lake Michigan	ND	5	D2
8/10/2010	Questionable	Caffeine	Drinking	= 13	5	J1
8/10/2010	Questionable	Caffeine	Drinking	= 9.5	5	J1
8/10/2010	Questionable	Caffeine	Lake Michigan	= 7.8	5	J1
8/10/2010	Questionable	Caffeine	Lake Michigan	ND	5	D1
8/10/2010	Questionable	Caffeine	Lake Michigan	ND	5	D1
8/10/2010	Questionable	Caffeine	Drinking	ND	5	D1
8/10/2010	Questionable	Caffeine	Drinking	ND	5	D1
8/10/2010	Questionable	Caffeine	Drinking	= 3.6	3	J1
8/10/2010	Questionable	Caffeine	Drinking	= 3.5	3	J1
8/10/2010	Questionable	Caffeine	Lake Michigan	= 3.1	3	J1
8/10/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
8/10/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
8/10/2010	Questionable	Hydrocodone (Vicodin)	Drinking	ND	20	L3
8/10/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
8/10/2010	Questionable	Hydrocodone (Vicodin)	Drinking	ND	20	L3
8/10/2010	Questionable	Hydrocodone (Vicodin)	Lake Michigan	ND	20	L3
8/10/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	= 3.6	2	I2
8/10/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	= 3	2	I2
8/10/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Drinking	= 2.2	2	I2
8/10/2010	Questionable	N,N-diethyl-m-toluamide (DEET)	Lake Michigan	= 2.1	2	I2
8/10/2010	Questionable	Sulfamethoxazole	Lake Michigan	= 7.6	5	I3
8/10/2010	Questionable	Sulfamethoxazole	Lake Michigan	= 6.4	5	I3
8/10/2010	Questionable	Sulfamethoxazole	Lake Michigan	ND	1	D1
8/10/2010	Questionable	Sulfamethoxazole	Lake Michigan	ND	1	D1
8/10/2010	Questionable	Sulfamethoxazole	Lake Michigan	ND	1	D1
8/10/2010	Questionable	Triclosan	Lake Michigan	ND	25	L3
8/10/2010	Questionable	Triclosan	Lake Michigan	ND	25	L3
8/10/2010	Questionable	Triclosan	Drinking	ND	25	L3
8/10/2010	Questionable	Triclosan	Drinking	ND	25	L3
8/10/2010	Questionable	Triclosan	Lake Michigan	ND	25	L3
8/10/2010	Questionable	Triclosan	Lake Michigan	ND	25	L3
8/10/2010	Questionable	Trimethoprim	Lake Michigan	ND	5	L3
8/10/2010	Questionable	Trimethoprim	Drinking	ND	5	L3
8/10/2010	Questionable	Trimethoprim	Drinking	ND	5	L3
8/10/2010	Questionable	Trimethoprim	Lake Michigan	ND	5	L3
8/10/2010	Questionable	Trimethoprim	Lake Michigan	ND	5	L3
8/10/2010	Questionable	Trimethoprim	Lake Michigan	ND	5	L3
1/19/2011	Not Trusted	Acetaminophen (Tylenol)	Drinking	= 5.6	5	E2
1/19/2011	Not Trusted	Acetaminophen (Tylenol)	Drinking	= 5	5	E2
1/19/2011	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 34	9.5	K5
1/19/2011	Not Trusted	Bisphenol A (BPA)	Drinking	= 33	9.5	K5
1/19/2011	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 32	9.5	K5
1/19/2011	Not Trusted	Bisphenol A (BPA)	Lake Michigan	= 29	9.5	K5
1/19/2011	Not Trusted	Bisphenol A (BPA)	Drinking	= 28	9.5	K5
1/19/2011	Not Trusted	Oxybenzone	Lake Michigan	= 2	1.9	Y4
1/19/2011	Not Trusted	Theophylline	Lake Michigan	= 27	10	K1
1/19/2011	Questionable	Acesulfame-K (Ace K)	Drinking	= 22	20	M3
1/19/2011	Questionable	Androstenedione	Lake Michigan	ND	0.3	M5
1/19/2011	Questionable	Androstenedione	Drinking	ND	0.3	M5
1/19/2011	Questionable	Androstenedione	Drinking	ND	0.3	M5
1/19/2011	Questionable	Androstenedione	Lake Michigan	ND	0.3	M5
1/19/2011	Questionable	Androstenedione	Lake Michigan	ND	0.3	M5
1/19/2011	Questionable	Atrazine-desethyl (DEA)	Lake Michigan	= 16	5	M3
1/19/2011	Questionable	Atrazine-desethyl (DEA)	Lake Michigan	= 14	5	M3
1/19/2011	Questionable	Atrazine-desethyl (DEA)	Drinking	= 10	5	M3
1/19/2011	Questionable	Atrazine-desethyl (DEA)	Lake Michigan	= 7.8	5	M3
1/19/2011	Questionable	Atrazine-desethyl (DEA)	Drinking	= 7.7	5	M3
1/19/2011	Questionable	Estrone	Drinking	ND	0.3	M4
1/19/2011	Questionable	Estrone	Lake Michigan	ND	0.3	M4
1/19/2011	Questionable	Estrone	Drinking	ND	0.3	M4
1/19/2011	Questionable	Estrone	Lake Michigan	ND	0.3	M4
1/19/2011	Questionable	Estrone	Lake Michigan	ND	0.3	M4
1/19/2011	Questionable	Ibuprofen (Advil)	Drinking	ND	19	R1
1/19/2011	Questionable	Ibuprofen (Advil)	Lake Michigan	ND	19	R1

Sample Date	QA/QC Flag ¹	Analyte Name (Common Name)	Sample Source ²	Result (ng/L) ³	Lowest Level that Can Be Detected (ng/L) ⁴	QA/QC Comment ⁵
1/19/2011	Questionable	Ibuprofen (Advil)	Drinking	ND	19	R1
1/19/2011	Questionable	Ibuprofen (Advil)	Lake Michigan	ND	19	R1
1/19/2011	Questionable	Ibuprofen (Advil)	Lake Michigan	ND	19	R1
1/19/2011	Questionable	Methadone	Drinking	= 16	4.8	L4
1/19/2011	Questionable	Progesterone	Drinking	ND	9.5	R1
1/19/2011	Questionable	Progesterone	Lake Michigan	ND	9.5	R1
1/19/2011	Questionable	Progesterone	Drinking	ND	9.5	R1
1/19/2011	Questionable	Progesterone	Lake Michigan	ND	9.5	R1
1/19/2011	Questionable	Progesterone	Lake Michigan	ND	9.5	R1
1/19/2011	Questionable	Salicylic acid	Lake Michigan	ND	43	R1
1/19/2011	Questionable	Salicylic acid	Drinking	ND	43	R1
1/19/2011	Questionable	Salicylic acid	Lake Michigan	ND	43	R1
1/19/2011	Questionable	Salicylic acid	Lake Michigan	ND	43	R1
1/19/2011	Questionable	Salicylic acid	Drinking	ND	43	R1
1/19/2011	Questionable	Sulfamethoxazole	Lake Michigan	ND	1	D1
1/19/2011	Questionable	Theobromine	Drinking	= 13	5	M3
1/19/2011	Questionable	Theobromine	Lake Michigan	= 7.3	5	M3
1/19/2011	Questionable	Theobromine	Drinking	ND	5	M3
1/19/2011	Questionable	Theobromine	Lake Michigan	ND	5	M3
1/19/2011	Questionable	Theobromine	Lake Michigan	ND	5	M3
1/19/2011	Questionable	Triclosan	Drinking	ND	24	R1
1/19/2011	Questionable	Triclosan	Lake Michigan	ND	24	R1
1/19/2011	Questionable	Triclosan	Lake Michigan	ND	24	R1
1/19/2011	Questionable	Triclosan	Lake Michigan	ND	24	R1
1/19/2011	Questionable	Triclosan	Drinking	ND	24	R1

This table is a working document. As subsequent batches of water quality data are received, the data set will be reevaluated and this table will be updated.

1 A quality assurance/quality control (QA/QC) review of the analytical results received from the three independent laboratories was performed prior to compiling Table A. The batch quality control data provided by each of the three laboratories were reviewed and the results were compared for compounds (analytes) that were analyzed by more than one laboratory. Suspicious data were flagged as "Questionable." Data with internal laboratory quality control issues and data with strong conflicts between laboratories were flagged as "Not Trusted." "Questionable" data are included in Table A, but "Not Trusted" data were removed.

2 "Lake Michigan" refers to untreated source water sampled from the shore or crib intakes. "Drinking" refers to finished water sampled from the purification plant outlets.

3 "ND" = No Detection

4 The "Lowest Level that Can Be Detected" refers to the Minimum Reporting Limit for that sample and analyte.

- 5
- A1 False positive possible; hit in field blank; no hit in method blank; other labs have greater MRLs; suspected bottle contamination
 - A3 False positive possible; high LCS recovery; no detections by other labs
 - B1 False positive possible; hit in field blank; no hit in method blank; not confirmed by 2nd lab; results < field blank hit.
 - B2 Hit in field blank; no hit in method blank; not confirmed by 2nd lab; result > field blank hit.
 - C1 False positive possible; hit in field blank; no hit in method blank; only analyzed by one lab; result < field blank hit.
 - C2 Hit in field blank; no hit in method blank; only analyzed by one lab.
 - D1 False negative possible; detected by other labs/methods.
 - D2 False negative possible; parent compound of this degradate detected.
 - E1 Not detected by 2nd lab with lower MRL; degradates not detected (degradates are typically detected along with analyte).
 - E2 Not detected by 2nd lab/method with lower MRL.
 - E3 Not detected by 2nd lab with lower MRL; low surrogate recovery for compound.
 - F1 Spike recovery of surrogate was low; detection is possibly low-biased.
 - G1 Sample bottle did not contain dechlorinating agent, which could result in false negatives for some compounds.
 - H1 Sample received with residual chlorine, quenched by lab prior to analysis; could result in false negatives for some compounds.
 - I1 Detected by more than one lab; >2x difference in levels of hits detected by separate labs.
 - I2 Detected by more than one lab; results are consistently lower than other labs; potential low bias.
 - I3 Detected by more than one lab; not detected by other labs/methods at similar levels.
 - J1 Qualitative result (analyte present, but level reported is questionable). Separate methods yielded results with >2X difference.
 - J2 Qualitative result (analyte present, level questionable). Parent compound and degradates detected in other samples at higher levels.
 - K1 Hit in field blank at similar level to hit in sample. Likely false positive.
 - K2 Hit in field blank at level greater than hit in sample. Likely false positive.
 - K3 Hit in field blank at level greater than hit in sample. Likely false positive. Not detected by 2nd lab.
 - K4 Hit in field blank at similar level to hit in sample. Batch QC acceptable. Detected by 2nd lab. Qualitative result.
 - K5 Hit in field blank at similar level to hit in sample. Likely false positive. Not detected by 2nd lab.
 - K6 Hit in field blank, no hit in sample.
 - K7 Hit in field blank at level approximately 10x lower than hits in samples.
 - L1 Low LCS recoveries; detected by 2nd lab at ~ 2X the level, but with much higher LCS recoveries; potential low-bias.
 - L2 Low LCS recoveries; detected by 2nd lab at higher concentrations.
 - L3 Surrogate recovery very low (below control limits).
 - L4 Surrogate recover highly variable. Detections questionable.
 - M1 Sample spiked for MS/MSD; recoveries were outside acceptance limits and/or MS-MSD differed by > 30%
 - M3 Sample spiked for MS/MSD; low spike recovery; possible low bias
 - M4 Sample spiked for MS/MSD; no recovery in MS or MSD.
 - M5 Sample spiked for MS/MSD; MS/MSD and LCS (Batch QC) were outside of recovery limits.
 - N1 Only detected in one sample; sample had unusual hits, which could not be confirmed.
 - O1 Very close to MRL; detected by two methods but not detected by second lab.
 - O2 Very close to MRL; detected by second lab near MRL; may be semi-quantitative.
 - P1 Interferences from new preservative - possible low bias
 - P2 Interferences from new preservative should not impact this compound
 - P3 Interferences from new preservative - possible false positive, but well above MRL
 - Q1 For this round of analysis, lab had issues with this analyte.
 - R1 Analyzed outside of hold time. Batch QC was acceptable, indicating that extracts did not degrade under storage.
 - Y3 Hit in travel blank; possible contamination; but detected by >1 lab at similar levels
 - Y4 Hit in method blank at similar level to hit in sample.
 - Z3 Good agreement between labs; possible low bias (higher values detected by other labs)